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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/930,161

08/16/2001

Yoshiju Watanabe

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1484

7590

03/07/2005

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EXAMINER

LUGO, DAVID B

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/930,161

Applicant(s)

WATANABE ET AL.

Examiner

David B. Lugo

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☒ Claim(s) 1-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/16/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 10/25/00. It is noted, however, that applicant has not filed a certified copy of the 20000-325255 application as required by 35 U.S.C. 119(b).

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. Claims 1-17 are objected to because of the following informalities:

a. Claim 1 recites the limitation "the code-modulated reproduced data" in line 4.

There is insufficient antecedent basis for this limitation in the claim.

b. Claim 1, line 6, the phrase "in respect of the bit sequence" is unclear and should be revised.

c. Claim 1 recites the limitation "the respective coefficient values" in lines 11-12.

There is insufficient antecedent basis for this limitation in the claim.

d. Claim 2 recites the limitation "the PLO\_SYNC pattern" in line 5. There is insufficient antecedent basis for this limitation in the claim.

e. Claim 2, line 8, it is suggested that "specifying data range" be changed to --specifying a data range--.

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- f. Claim 2, line 14, “means for specifying data” should be --means for specifying a data range--.
- g. Claim 3, lines 3-4, the limitation “means for comparing pattern in respect of the rear section of the bit sequence” is unclear and should be revised.
- h. Claim 3 recites the limitation “the GAP pattern” in line 5. There is insufficient antecedent basis for this limitation in the claim.
- i. Claim 3 is objected to as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: connection between the output of the means for specifying a data range, and the means for shifting.
- j. Claim 4, lines 3-4, the limitation “means for comparing pattern, in respect of a data position detection pattern” is unclear and should be revised.
- k. Claim 4, line 8, “specifying data range” should be --specifying a data range--.
- l. Claim 4, line 10, “means for comparing pattern” should be --means for comparing--.
- m. Claim 4, line 14, “means for specifying data” should be --means for specifying a data range--.
- n. Claim 5, lines 7-8, “this data quality signal” should be --the data quality signal--.
- o. Claim 6, lines 7-8, “this data quality signal” should be --the data quality signal--.

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- p. Claim 7 recites the limitation “the identified bit sequence” in lines 11-12, and “said means for inputting the output” in lines 12-13. There is insufficient antecedent basis for these limitations in the claim.
- q. Claim 8 recites the limitation “the respective coefficient values” in line 13. There is insufficient antecedent basis for this limitation in the claim.
- r. Claim 8, line 14, “counting means” should be --counting circuit--.
- s. Claim 8 recites the limitation “the input bit sequence” in lines 15-16. There is insufficient antecedent basis for this limitation in the claim.
- t. Claim 8, line 20, “shifting bit” should be --bit shifting--.
- u. Claim 8, lines 22-23, “data phase identification circuit” should be --data phase determination circuit--.
- v. Claim 9 is objected to as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: connection between the data synchronization detection device, the means for decoding data, and the plurality of means for descrambling.
- w. Claim 10 is objected to as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: connection between the data synchronization detection device and the means for code-demodulating data.

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- x. Claim 11, lines 7-8, “this code-modulated data” should be --the code-modulated data--.
- y. Claim 11 recites the limitation “the data code modulation codeword partition” in line 10. There is insufficient antecedent basis for this limitation in the claim.
- z. Claim 11 recites the limitation “the determination result of means for determining data phase” in lines 15-16. There is insufficient antecedent basis for this limitation in the claim.
- aa. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation of recording information from the scrambling means is already recited in the last 4 lines of claim 11.
- bb. Claim 13 recites the limitation “the clock synchronization” in line 3. There is insufficient antecedent basis for this limitation in the claim.
- cc. Claim 13, line 7, “this data” should be --the data--.
- dd. Claim 13, line 9, “identifying of said data” should be --identifying said data--.
- ee. Claim 15 recites the limitation “the scrambling information” in line 3. There is insufficient antecedent basis for this limitation in the claim.
- ff. Claim 16 recites the limitation “the clock synchronization” in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

***Double Patenting***

4. Claims 11 and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 8 of copending Application No. 09/930,215. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 11 and 12 of the instant application recite an apparatus for recording information, and claims 7 and 8 of the copending '215 application recite an analogous method for recording information having steps which are performed by components of the apparatus claimed in the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 13-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7. Regarding claims 13-15, the descriptive material is not embodied on a computer-readable medium and thus cannot impart functional change to a computer device. Regarding claims 16 and 17, an information recording format is an arrangement of data, and does not fall into one of the four statutory categories of invention. See MPEP §2106 IV.B.1.

8. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 above are further rejected as set forth below in anticipation of applicant amending any of the claims to place them within the four statutory categories of invention.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimura U.S. Patent 6,147,826.

11. Regarding claims 13 and 16, Hashimura discloses a data format for recording information in Figure 3C that includes a PLO portion 102, a data portion 108, and error correction ECC portion 110, and a GAP portion 118, where the data portion and the PLO portion are considered to be adjacent, and the PLO portion, data portion, ECC portion, and the GAP pattern are considered to constitute a sector (see Fig. 10A).

12. Regarding claim 14, the PLO portion, data portion, and the GAP pattern are considered to be recorded as a bundled sector (see Fig. 10A).

13. Regarding claims 15 and 17, the PLO portion, data portion, and the GAP pattern are considered to be recorded as a bundled sector (Fig. 10A), where the recording information is scrambled (see col. 7, lines 44-46).

***Allowable Subject Matter***

14. Claims 1-10 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.



***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


Takeuchi U.S. Patent 4,731,678 discloses a digital data recording and reproducing method where a specified bit sequence is used as a synchronizing signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lugo  
3/2/05

  
**KHAI TRAN**  
**PRIMARY EXAMINER** 3/4/05